Leveraging rapid prototyping and design automation to normalize the paradigm of patient-oriented or patient-specific care

A dissertation proposal by;

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# Abstract

Within the context of this research proposal, patient-oriented and/or patient-specific care refers to the delivery of medical solutions customized to the patient’s anatomy and physiology. The introduction of advanced designed, visualization and manufacturing technologies have motivated research medical teams to implement such technologies with the goal of optimizing care. While several of these efforts have generated the momentum needed in the field, very little has been done to fully consolidate the process for the sake of repeatability. This proposal outlines several research projects that seek to…

# Background

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# Projects and Objectives

The following projects have been selected as interconnected pieces, parallel processes

## Design by Dragging pt. 2 – Generation of a upgraded, deployable tool for the design and evaluation of medical devices

Current;

* The current version of the *design by dragging* software is out of commission
* The original version of the software is bound to close source design and simulation solutions
* The original version of the software does not have a customer base
* The developers of the original version of the software do not have more than a single clinical case for validation
* The original version of the software only provides 2D data visualization

Goals;

* Re-build…

# Design by Dragging

The graphical user interface developed by Dr. \_\_\_\_\_ allows device designers and developers to visualize all design variants and their functional performance, the latter represented by FEA simulation data.